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CLAIMS

1. A two-stroke motor of the rotary piston type including a cylinder block containing a plurality of cylinders, rotatably mounted within an engine housing and indirectly geared to a crankshaft, journalled for rotation within said engine housing and piston members supported upon said crankshaft for rotary motion within said cylinder block as said crankshaft and said cylinder block rotate in the same direction; said cylinder block being sealed against said engine housing by slidably mounted circular side seal rings having provision for automatically rotatable induction and/or transfer timing rings and with said engine housing having peripheral pivoted air vents for automatically variable air flow.

2. The motor of claim 1 wherein said cylinder block is indirectly geared to said crankshaft by epicyclic gears of ratio 2:1.

3. The motor of claim 2 wherein said epicyclic gears comprise two "piggy-back" idler gears.

4. The motor of claim 3 wherein timing of the entry of combustion gases into said cylinders is controlled by side entry tracts located in the end casings for communication with ports in said cylinders.

5. The motor of claim 4 wherein said ports of said cylinders and said side entry tracts are sealed by intimate contact between rotating cylinder side seal rings and stationary casing side seal rings and exhaust plates.

6. The motor of claim 5 wherein said cylinders are open to atmosphere after combustion via air chokes and reed valves, allowing fresh cold air to pass across the crown of individual ones of said piston members, thereby purging said cylinders of any residual exhaust gas.

7. The motor of claim 6 wherein the quantity of said cold air is synchronized by said air chokes to be proportional to the quantity of fuel/air mixture consumed by said motor.

8. The motor of claim 7 wherein the induction and/or transfer phases of said motor are

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automatically varied by rotatable timing rings relative to the speed of said motor.

9. The motor of claim 8 wherein the air vent opening is automatically variable to ensure that the temperature of said motor remains within set limits during operation.

10. The motor of claim 9 wherein the sealing of the casing-side exhaust plate against the cylinder-side outer seal ring is accomplished by the pressure of the exhaust gas itself.

11. The motor of claim 10 wherein the movement of the big-end of the connecting rod is controlled by rigid guides in the crankcase.

12. The motor of claim 11 wherein individual ones of said piston members is cooled internally via air ports in the cylinder wall.

13. The motor of claim 12 wherein the primary compression of the induced gas is increased due to the solid base of said piston members meeting flush with said cylinder block.

14. The motor of claim 13 wherein any unused portion of the fuel/air mixture is returned to the incoming charge.

15. The motor of claim 14 wherein expansion of said motor upon reaching operating temperature does not affect the sealing of said motor due to the compressible synthetic rubber "O" ring seals and the slidably mounted seal rings.